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Claims

1. A vaccine composition comprising an antigen bearing target and further comprising a fusion polypeptide, said fusion polypeptide comprising

a first amino acid sequence which can bind to a carbohydrate

and

a second amino acid sequence comprising a ligand for a cell surface polypeptide of a leukocyte,

wherein said vaccine composition comprises said fusion polypeptide bound to a carbohydrate on said antigen bearing target and further comprises some of said polypeptide which is not bound to said antigen bearing target.

- 2. The vaccine composition of claim 1, wherein said ligand is chosen from the group: a ligand for a cytokine receptor, a ligand for CD40, a ligand for an adhesion molecule, a ligand for a defensin receptor, a ligand for a heat shock protein receptor, a ligand for a T cell costimulatory molecule, a ligand for a counterreceptor for a T cell costimulatory molecule, a ligand for an opsonin receptor.
- 3. The vaccine composition of claim 2 wherein said ligand comprises at least about five contiguous amino acids of a naturally occurring cytokine, said cytokine being chosen from the group: GM-CSF, an interleukin, a chemokine, an interferon, a TNF-alpha, a flt-3 ligand.
- 4. The vaccine composition of claim 2 wherein said ligand comprises at least about five contiguous amino acids of a naturally occurring CD154 molecule.
- 5. The vaccine composition of claim 1, wherein said antigen bearing target is chosen from the group: a tumor cell, a virus, a bacterial cell, a fungal cell, a cell of a parasite,

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a prion, a mammalian cell, an insect cell, a polypeptide free of other cell-derived material.

- 6. The vaccine composition of claim 5, wherein said antigen bearing target is pathogenic.
- 7. The vaccine composition of claim 5, wherein said antigen bearing target is attenuated.
- 8. The vaccine composition of claims 1, wherein said antigen bearing target is a cell which is substantially unable to divide.
- 9. The vaccine composition of claims 1, wherein said leukocyte is an antigen presenting cell.
- 10. The vaccine composition of claim 9, wherein said leukocyte is a professional antigen presenting cell.
- 11. The vaccine composition of claim 9, wherein said leukocyte is a dendritic cell.
- 12. The vaccine composition of claim 1, wherein said first amino acid sequence can bind to a sialic acid on a glycoprotein.
- 13. The vaccine composition of claim 1, wherein said first amino acid sequence comprises a carbohydrate-binding domain of a naturally occurring lectin.